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09/714,285

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6273

7590

12/29/2004

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EXAMINER

TSE, YOUNG TOI

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/714,285

Applicant(s)

SAITO ET AL.

Examiner

YOUNG T. TSE

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-100 is/are pending in the application.
- 4a) Of the above claim(s) 81-100 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-80 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/062,586.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>111700,120303,0810</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 17-80) in the reply filed on September 21, 2004 is acknowledged.
2. Claims 81-100 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on September 21, 2004.

Drawings

3. Figures 6A-6B, 7A-7B, 8-12, and 15-17 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (see the Brief Description of the Drawings). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

solved by the applicant's invention. This item may also be titled "Background Art."

- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if

an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The specification does not include the continuation statement, which is a division of the U.S. application Serial No. 09/062,586, now U.S. Patent No. 6,185,256.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 26, 32, 36, 44, 50, 57-63, and 77 are objected to because of the following informalities:

In claim 26, lines 9 and 11, "a data" and "an intersymbol" should be "the data" and "the intersymbol", respectively.

In claim 32, line 3, "line an" should be "line, an".

In claim 36 (line 7) and claim 44 (line 7), "an intersymbol" should be "the intersymbol".

In claim 50, line 8, "a sense amplifier" should be "said sense amplifier".

In claim 57, line 8, "a local" should be "the local".

In claim 58, line 6, "local" should be "the local".

In claim 59, line 2, "a row selection" should be "a row selection".

In claim 60, line 2, "row selection" should be "said row selection"; line 3, "shares" should be "share"; line 5, "latches" and "selects" should be "latch" and "select", respectively; and line 8, "prevents" should be "prevent".

In claim 61, line 2, "row selection" should be "said row selection"; line 3, "comprises" should be "comprise", respectively; and line 8, "of said" should be "of said data".

In claim 62, line 2, "row selection" should be "said row selection" and line 3, "holds" should be "hold".

In claim 63, line 2, "row selection" should be "said row selection"; line 3, "includes" should be "include"; and line 5, "holds" should be "hold".

In claim 77, line 8, "in a" should be "in the".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 17-80 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants are requested to clarify the difference between the present invention and the prior art as shown in Figures 1-11 and 15-18 in the specification in order to enable a person skill in the art to understand the present invention as recited in claims 17-80.

Applicants are also requested to clarify that which claim(s) corresponds to which embodiment(s) of the present invention since the instant application includes a total of 18 different embodiments or inventions. See the Brief Description of the Drawings.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims s 1-80 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-47 and 65-80 are vague and indefinite since they are apparatus claims, however, each independent claims does not use the word "comprising" or "including". For example, in claim 17, it is unclear what are the relationships among the signal transmission system, the write amplifier and the sense amplifier.

In claim 20 (lines 11-12 and 17-18); claim 22 (lines 7-8); claim 30 (lines 3-4); claim 37 (lines 4 and 6); claim 38 (line 2); claim 39 (lines 2-3); claim 40 (lines 14 and 15-16); claim 42 (line 4); claim 45 (lines 3, 4 and 6); claim 46 (line 2); claim 47 (line 3); claim 50 (lines 2, 3-4, 4, 5, and 11); claim 51 (lines 4-5, 5-6, and 16); claim 52 (lines 3

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and 4); claim 56 (lines 3, 8, and 10); claim 58 (line 5); claim 59 (line 6); claim 60 (lines 3-4, 6, and 9); claim 66 (lines 5 and 8); claim 70 (lines 3 and 5); claim 71 (line 5); claim 73 (lines 3-4 and 5); claim 74 (line 4); claim 78 (lines 3 and 6); claim 79 (line 2); and claim 80 (lines 2-3); the phrases "said plurality of signal transmission lines", "said data bus", "said continuous cycle period", "said continuous read and write cycle periods", "said target unit", "said readout circuit", "said block", "said off state", "said row block", "said plurality of row blocks", "said row blocks", "the row block", "decoder and row selection line holding circuits", "other blocks", "the same block", "said write-completed block", "said P-channel MOS transistor", "the first sense amplifier", "the final sense amplifier", and "said continuous write cycles" all lack antecedent basis.

In claim 24, line 3, it is unclear or no specific what is "a partial-response detection method"?

In claim 48, it is unclear what is the relationship between the state latch circuit and the plurality of blocks.

In claim 63, line 3, is the circuit different than the circuit recited in claim 58?

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 17-19, 65 and 69 are rejected under 35 U.S.C. 102(e) as being anticipated by Akiyama et al..

Akiyama et al. (U.S. Patent No. 5,638,335) discloses a memory device in Figure 3 comprising a memory array having a plurality of bits and a plurality of memory blocks.

With respect to claims 17-19, 65 and 69, the memory device comprises a data selector has at least a column select switch for connecting or disconnecting bit lines connected to memory cells with or from a write amplifier and a sense amplifier. See Figure 3 and claim 5.

12. Claim 48 is rejected under 35 U.S.C. 102(e) as being anticipated by Kurtze et al..

Kurtze et al. (U.S. Patent No. 6,105,083) discloses a processing element 200 in Figure 3A receives a control information from control registers 243 which are loaded via a bus connected to a host computer as indicated at 245.

With respect to claim 48, the control registers 243 may be implemented using the register constructions shown in Figures 4A and 4B. The control information may be double buffered and thus have two states, an "active" state and a "shadow" state. The active state contains the current state used in processing, while the shadow state is the control information for the next function to be performed. See column 9, lines 50-59.

Conclusion

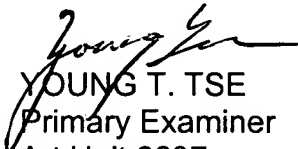
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

References Roohparvar, Tsuruda et al., Furuyama et al., Ohshima, and Kobayashi are made of record as describing related semiconductor memory devices comprising write amplifiers and sense amplifiers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday and Wednesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


YOUNG T. TSE
Primary Examiner
Art Unit 2637